Engineering Division

Purpose

To provide a centralized source of general engineering services for the City including surveying, design work, review and approval of final plans submitted by outside consultants, site inspections and coordination of project activities initiated between the City and other agencies.

GIS Uses

The Engineering Division of the Land Management & Development Department provides mapping for a number of data layers utilized throughout the City – street centerline, city limits, and floodway. The street centerline is maintained in order to generate the annual Powell Bill Report and for other issues regarding maintenance responsibility for streets within the City limits. Floodway data is used for determinations of flood zones for use with the National Flood Insurance Program of which Salisbury is a member. Staff has indicated a desire to be able to utilize County parcel data in coordination with the data layers above to produce listings for address in flood prone areas, within certain areas of the City.

The Engineering Division maintains its information utilizing AutoCAD Land Development Desktop. While this product has the "look" and "feel" of GIS because of its functionality within AutoCAD Map, it is not a true GIS system. Thus, the information that is generated by Engineering is not as easily shared among users throughout the City. The GIS Division has approached this situation with several options in mind...

1) Continue to convert/export data to a native GIS format
2) Convert existing CAD data to a native GIS format, preferably ArcInfo
3) Implement ArcSDE as a data storage solution with a CAD Client interface

Only selected CAD data sets are currently being considered for conversion to a native GIS format and/or sharing through ArcSDE.

Data Development

The following data layers have been identified as necessary for use by Engineering:

Layer Name	Use	Status
City ETJ boundary	Reference	Complete
City limit boundary	Reference	Complete
Floodway	Identify properties within flood-prone areas	Complete; digitized from FEMA maps
Impervious surfaces	Include locations of sidewalks, parking areas, etc.	Not started
Institutions	Reference	Complete (in CAD)
Orthophotography	Reference	Current photos date to 1983; new flight scheduled winter of 2001-2002
Parcels	Tax map and parcel number matching; reference	County in process of acquiring data from vendor, ASI
Parking areas	Indicate location and type of parking areas	Not started
Parks	Reference	Complete
Pedestrian access	Include locations of sidewalks, pedestrian crosswalks, wheelchair curb cuts, etc.	Not started
Streets	Address matching; Powell Bill report	Currently maintained in CAD; anticipate moving to ArcInfo in early 2002
Subdivisions	Indicate locations of named subdivisions; reference	Not started
Topography	Planning purposes; reference (2 ft contours)	Complete (based on 1987 flight)
Traffic volumes	Indicate volume of traffic at certain points along City streets	Currently received from NCDOT in paper format

Goals

1. Work with GIS Coordinator to determine when street centerline will be converted to ArcInfo format.

    - Identify other attribute data needed by other City departments
    - Easily share data and updates with County and other City departments
    - Complete block ranges for City streets

2. Develop data layers as identified in the ***Data Development*** section.

3. Develop a web-based application for the identification of flood prone areas available to the general public as well as other City departments.

4. Develop pedestrian access data layer(s) to include locations of sidewalks, pedestrian crosswalks, etc. Determine precision level prior to development of data to see if this information may also be used for impervious surface calculations.

5. Develop impervious surface data layer(s) for storm water runoff analysis purposes. May be able to utilize this information for an assessed impervious surface fee.

6. Aid in development of subdivision data layer.